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CLAIMS

1. A material comprising poly-(L-lactide/D-lactide/glycolide).
2. The material of claim 1 comprising at least about 2 molar percent D-lactide.
3. The material of claim 2 comprising at least about 4 molar percent D-lactide.
4. The material of claim 2 comprising about 2 to about 10 molar percent D-

10 lactide.

5. The material of claim 4 comprising about 80-90 molar percent L-lactide, about 2-10 molar percent D-lactide, and about 5-15 molar percent glycolide.

6. The material of claim 5 comprising about 83-87 molar percent L-lactide, about 3-7 molar percent D-lactide, and about 8-12 molar percent glycolide.

15 7. The material of claim 6 consisting essentially of 85 molar percent L-lactide, 5 molar percent D-lactide, and 10 molar percent glycolide.

8. The material of claim 5 further comprising about 0.1-5 molar percent of a polymer formed from alpha-hydroxy-alpha-ethylbutyric acid; alpha-hydroxy-beta-methylvaleric acid; alpha-hydroxyacetic acid; alpha-hydroxybutyric acid; alpha-hydroxycaproic acid; alpha-hydroxydecanoic acid; alpha-hydroxyheptanoic acid; alpha-hydroxyisobutyric acid; alpha-hydroxyisocaproic acid; alpha-hydroxyisovaleric acid; alpha-hydroxymyristic acid; alpha-hydroxyoctanoic acid; alpha-hydroxystearic acid; alpha-hydroxyvaleric acid; beta-butyrolactone; beta-propiolactide; gamma-butyrolactone; pivalolactone; or tetramethylglycolide; or combinations thereof.

25 9. A process of making a material, the process comprising:
a) combining L-lactic acid monomer, glycolic acid monomer and at least about 2 molar percent D-lactic acid monomer to form a mixture; and
b) polymerizing substantially all of the mixture.

10 10. The process of claim 9 wherein the polymerization is preformed in the
30 presence of a catalyst.

11. The process of claim 10 wherein the polymerization is preformed for between 24 and 72 hours.

12. An implantable medical device comprising poly-(L-lactide/D-lactide/glycolide).

35 13. The medical device of claim 12 wherein the device is selected from the group consisting of a bone plate, bone screw, mesh, suture anchor, tack, pin or intramedullary rod

14. The medical device of claim 13 consisting essentially of unreinforced poly-(L-lactide/D-lactide/glycolide).

15. The medical device of Claim 14 consisting essentially of reinforced poly-(L-lactide/D-lactide/glycolide).

5 16. A method of using a bioabsorbable bone fixation device, the method comprising:

 a) providing a bioabsorbable bone fixation device comprising poly-(L-lactide/D-lactide/glycolide), the device disposed in a first shape in a free state; then

 b) heating the bone fixation device; and then

10 c) applying force to the device so that the device obtains a second shape in a free state which is different than the first shape and which approaches the shape of a bone surface to which it will be attached.

 17. The method of using of claim 16 wherein the heating is preformed at between about 55°C to about 130°C for between about 2 to about 10 seconds.

15 18. Polymeric material having a heat of fusion of about 0.4-10 J/G, tensile strength retention at 26 weeks of incubation of at least about 50% and tensile strength retention at 52 weeks at incubation of at most about 25%.

 19. The polymeric material of claim 18 wherein the material comprises poly-(L-lactide/D-lactide/glycolide).

20 20. The polymeric material of claim 19 comprising at least about 2 molar percent D-lactide.

 21. The polymeric material of claim 20 comprising about 80-90 molar percent L-lactide, about 2-10 molar percent D-lactide, and about 5-15 molar percent glycolide.

25 22. Polymeric resin having a heat of fusion of about 15 to about 25 J/G, which upon molding has tensile strength retention at 26 weeks of incubation of at least about 50% and tensile strength retention at 52 weeks of incubation of at most about 25%.

 23. The polymeric material of claim 22 wherein the material comprises poly-(L-lactide/D-lactide/glycolide).

30 24. The polymeric material of claim 23 comprising at least about 2 molar percent D-lactide.

 25. The polymeric material of claim 24 comprising about 80-90 molar percent L-lactide, about 2-10 molar percent D-lactide, and about 5-15 molar percent glycolide.

35 26. Polymeric material having tensile strength at 0 weeks of incubation of about 65-101 MPa, tensile strength at 26 weeks of incubation of about 50-75 MPa, tensile strength at 44 weeks of incubation of about 0-37 MPa, and tensile strength at 60 weeks of incubation of 0 MPa.

 27. The polymeric material of claim 26 comprising poly-(L-lactide/D-lactide/glycolide).

- 5 28. The polymeric material of claim 26 having a heat of fusion of about 0.4-10 J/G.
29. The polymeric material of claim 28 having a heat of fusion of about 0.5-5 J/G.
30. The polymeric material of claim 26 formed from a resin having a heat of fusion of about 15-25 J/G.
- 10 31. The polymeric material of claim 30 formed from a resin having a heat of fusion of about 18-21 J/G.
32. The polymeric material of claim 26 having tensile strength at 0 weeks of incubation of about 74-92 MPa, tensile strength at 26 weeks of incubation of about 56-69 MPa, and tensile strength at 44 weeks of incubation of about 9-27 MPa.
- 15 33. A material comprising poly-(L-lactide/D-lactide/glycolide) made by the process comprising:
- (a) combining L-lactic acid monomer, glycolic acid monomer and at least about 2 molar percent D-lactic acid monomer to make a mixture; and
- (b) polymerizing substantially all of the mixture.
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